



CODEN [USA]: IAJ PBB

ISSN: 2349-7750

## INDO AMERICAN JOURNAL OF PHARMACEUTICAL SCIENCES

Available online at: <http://www.iajps.com>

Research Article

### ENHANCING THE PREPARATION OF STUDENTS FOR THE SURRENDER OF ATHLETIC STANDARDS THROUGH EXERCISES OF POWERLIFTING

**Garipova Albina Zufarovna\*, Zotova Firuza Rakhmatullova, Askhamov Ayrat  
Albertovich**

Department of Theory and Methodology of Physical Education and Health Safety, Kazan  
Federal University, Kazanskaya str. 89, Yelabuga, Republic of Tatarstan, Russia, 423600

**Abstract:**

*Student youth represents the potential of the future of the country and the constructive basis of many social processes: politics, economy, science, sports. Therefore, preserving and augmenting students' health, forming a healthy lifestyle, and developing student sports are of significant importance for society in general.*

*One of the components of a healthy lifestyle of young people is the optimal regimen of physical activity, the systematic use of physical activity throughout life.*

*At present, the students' interest in traditional sports shows a certain decrease in their popularity amid the high appeal of athletic gymnastics, bodybuilding, aerobics, and powerlifting.*

*In order to determine the attitude of student youth to the introduction of powerlifting in the educational process of a higher educational institution, we conducted a questionnaire survey among students, which gave a positive result.*

*This paper presents the results of a questionnaire survey of students aimed at studying their attitude to the introduction of powerlifting in the educational process of physical education at higher educational institutions.*

*The preliminary results of the introduction of the pilot powerlifting program are described in the process of physical education of the students studying pedagogy.*

**Keywords:** *powerlifting, sport, student, interest, health, development, physical culture complex.*

**Corresponding author:****Garipova Albina Zufarovna,**

Senior Lecturer, Department of Theory and Methodology of  
Physical Education and Health Safety, Kazan Federal University,  
Kazanskaya str. 89, Yelabuga, Republic of Tatarstan, Russia, 423600  
[albina\\_garipov@mail.ru](mailto:albina_garipov@mail.ru)

QR code



Please cite this article in press as Garipova Albina Zufarovna et al, *Enhancing the Preparation of Students for the Surrender of Athletic Standards through Exercises of Powerlifting*, Indo Am. J. P. Sci, 2017; 4(09).

## INTRODUCTION:

At present, the students' interest in traditional sports such as artistic gymnastics, track-and-field athletics, skiing, skating, cycling, etc., shows a certain decrease in their popularity amid the high appeal of athletic gymnastics, bodybuilding, aerobics, and powerlifting. Young people see in these types wonderful means of physical and spiritual development, self-disclosure and self-esteem.

Our observations show that, to date, quite a large number of young people attend fitness gyms for power training.

Power qualities can be developed by the known kinds of sport such as weightlifting, kettlebell lifting, and arm wrestling. Strength disciplines may include a new kind of sport as powerlifting, being rapidly developing in the global arena. The term "powerlifting" is derived from the English word "power" and "lift". Powerlifting is a strength sport, which is to overcome the resistance of the weight most heavy for an athlete [2].

In Russia, this discipline is also called "power triathlon", because powerlifting includes three strength exercises: back squats, namely with a barbell on top of the blades; press on the horizontal bench; and dead lift. The sum of these exercises determines the qualification of powerlifters. A distinctive feature of the powerlifting is that this discipline places importance on the indicators of absolute strength.

Due to the increased popularity of powerlifting among young people and adults, more and more people take up this strength sport. Its popularity can

be explained by its simplicity and accessibility, rapid growth of results and positive impact on the athlete's health [3].

Thus, the question of introducing this sport into the educational process of higher educational institutions became urgent.

## RESEARCH METHODS:

The main methods of research were analysis of the scientific and methodical literature, questionnaire survey, and methods of mathematical statistics.

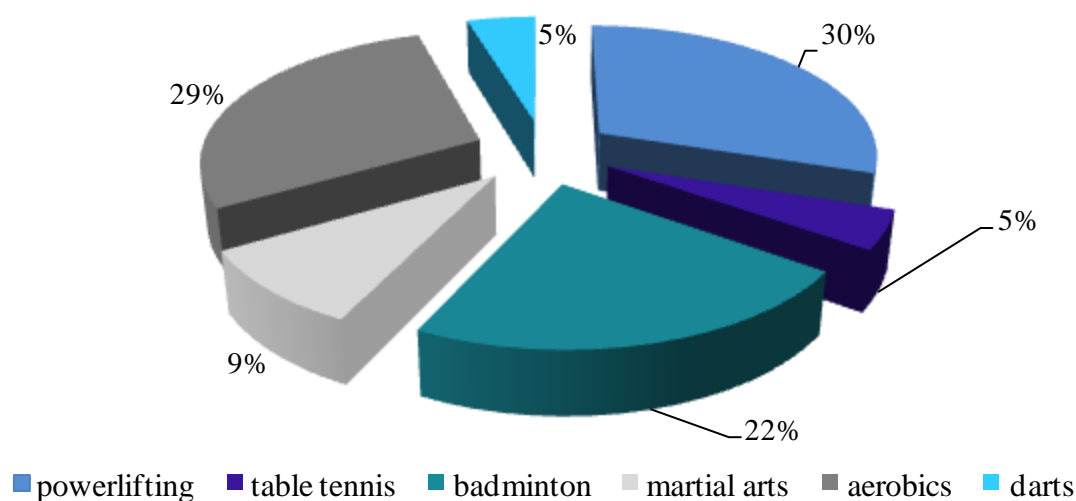
In order to determine the attitude of student youth to the introduction of powerlifting in the educational process of a higher educational institution, we conducted a questionnaire survey among students of the I-III year of Yelabuga Institute of Kazan (Volga region) Federal University (K(V)FU), which involved 320 people, including 119 young men. Our questionnaire consists of 12 questions and 70 sub-questions of closed and open types [4].

## RESULTS:

Analysis of the answers of the surveyed students made it possible to identify the following:

- dissatisfaction of students with the content of the subject "Physical Culture" (47% of respondents chose this variant);

- students propose to include in the content of the physical culture program of higher educational institutions such sports as powerlifting (30%), aerobics (29%), badminton (22%), martial arts (9%), table tennis (5%), and darts (5%) (Figure 1).



**Fig 1: Distribution of answers to the question: "Which sport in your opinion can be included to the physical education program at the universities?"**

**Table 1: Distribution of the answers to the question “What characteristics of powerlifting, in your opinion, can serve as recommendation for its use in physical culture at the universities?”**

What characteristics of powerlifting, in your opinion, can serve as recommendation for its use in physical culture at the universities?	Distribution of answers
Contributes to the diversified physical development of a person	84 (27.5%)
Contributes to the formation and development of muscles	77 (25.2%)
Powerlifting increases the volitional qualities of a person	64 (20.8%)
Accessibility of this type of sport	34 (10.8%)
Health promotion	29 (9.2%)
Contributes to the formation of positive emotions and improves well-being	27 (8.6%)
Own variant	5 (1.6%)

- the respondents positively assess the proposal for the introduction of powerlifting in the program of physical education at the universities (79%).

- answering the question “What characteristics of powerlifting, in your opinion, can serve as recommendation for its use in physical culture at the universities?”, the students named first of all that this sport contributes to the diversified physical development of a person, forms and develops muscles, increases the volitional qualities of a person (Table 1).

The students unanimously answered positively to the question “How do you think it is possible to introduce powerlifting at your university as sport classes?” The material and technical base fully complies with this sport, according to most respondents (95%).

Answers to the question “What measures should be taken to effectively implement powerlifting in the process of physical education at your university?” were the following: work on the development of powerlifting (110 people - 35.2%), local organization and conduct of seminars (83 people - 26.5%), organization of postgraduate courses for teachers (77 people - 24.6%), and improvement of the material and technical base (50 people - 16%).

Our survey testified that powerlifting should be introduced into the educational process of physical classes of students. Consequently, the preparation of physically developed, strong-willed, brave and disciplined athletes ready for labor and defense of their homeland will be carried out [5].

In our opinion, another important argument should be noted. Considering the test part of the fitness complex “Ready for Labor and Defense” (GTO) for students and youth, we found that most of the tests and norms are based on strength and endurance, which powerlifting develops. Consequently, the introduction of powerlifting in the educational process will ensure the students’ readiness to reach the GTO standards.

A very important aspect of powerlifting is the possibility of social rehabilitation of people with disabilities. Powerlifting involves people with visual impairments and spinal and limb injuries being almost as good as ordinary athletes at it. The bench press competitions are part of the Paralympic Games program. With the help of sports, disabled people gradually return to normal life, develop muscles and overcome physical limitations.

Thus, on the basis of the analysis of the scientific and methodological literature, questionnaire survey data, study of the practice of physical education of student youth, we developed a program of physical education classes with the elements of powerlifting, which is now tested at practical physical classes at Yelabuga Institute of K(V)FU.

The experimental program of physical education consists of two parts: compulsory and elective. The compulsory part consists of four blocks: athletics; sport games; ski training; and gymnastics. The elective part consists of three blocks: competitive exercises; special preparatory exercises; and circuit training (Table 2).

**Table 2: Content of the experimental program of physical education of pedagogical profile students.**

Compulsory part				Elective part						
Track-and-field athletics	Sports games	Ski races	Gymnastics	Competitive exercises		Special preparatory exercises			Circuit training	
				Bench press	Squats	Deadlift	Close-grip bench press; Reverse -grip bench press; Bench press with interval s	Front squats; Slow squats with fast raise; Narrow stance squats	Deadlift up to knees; Podium deadlift; With slow lowering to the podium	Complexes of exercises using dumbbells, disks, bars, medicine balls

To determine the initial level of physical fitness of female students of the experimental and control groups, the tests were conducted doing exercises included in the GTO complex: standing long jump, push-ups, sit-ups for 1 minute, lying pull-ups, and 100 m run.

The students also reached qualifying standards being part of the compulsory program of physical education at the university: 60 m run, single-leg squats, and 1 kg medicine ball throws.

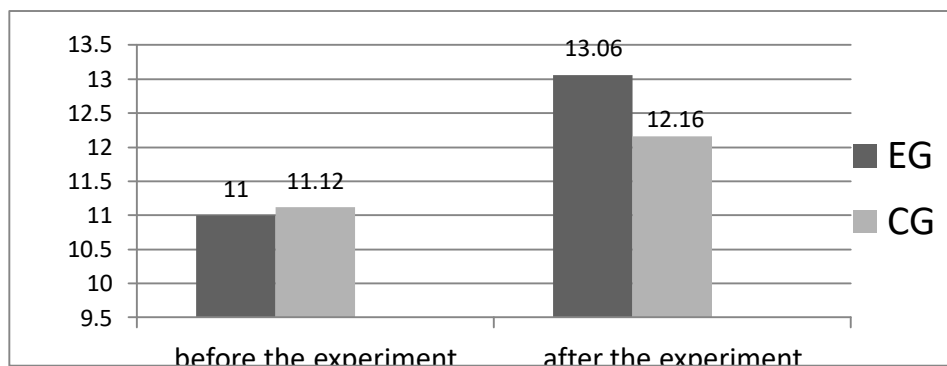
At the beginning of the study, there were no significant differences between the groups in the studied indicators.

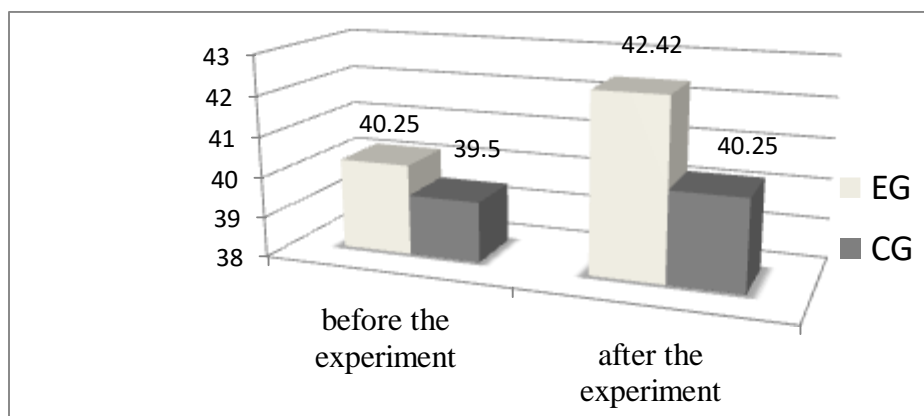
To determine the intermediate results of introducing powerlifting in the process of physical education of future teachers, the level of physical fitness of the students of the experimental and control groups was re-tested after four months of experimental work in

accordance with the data of the GTO standards and compulsory qualifying standards for physical culture at higher education institutions [7].

Analysis of the obtained results allows us to conclude that both in the experimental and in control groups there is a positive increase in the studied parameters. It should be noted that the rate of change in all the studied parameters of physical fitness is higher in the experimental group than in the control group.

The average result in lying pull-ups in the control group was  $12.16 \pm 1.89$  repetitions, in the experimental group –  $13.06 \pm 1.85$  repetitions. The experimental group improved their result by 2.06 repetitions, the control group – by 1.04 repetitions. Before the experiment, the following results were obtained: the experimental group – 11.00 repetitions, the control group – by 11.12 repetitions (see Fig. 1).



**Fig. 1 The results in lying pull-ups in the female experimental and control groups****Fig. 2 The results in sit-ups in the female experimental and control groups**

The average sit-up result in the experimental group is  $42.42 \pm 3.29$  repetitions, and in the control group –  $40.25 \pm 2.25$  repetitions. The girls of the experimental group showed increase in their sit-up results by 2.17 repetitions, control group – by 0.75 repetitions. Before the experiment, the following results were obtained: the experimental group –  $40.25 \pm 3.12$  repetitions, the control group –  $39.50 \pm 1.93$  repetitions (see Fig. 2).

The average push-up result in the experimental group was  $12.50 \pm 1.50$  repetitions, in the control group –  $11.75 \pm 1.28$  repetitions. The girls of the experimental group showed increase in the number of push-ups done by 1.64 repetitions. The girls of the control group improved their result by 0.88 repetitions.

The average result in standing long jump of the girls of the experimental group was  $175.92 \pm 15.90$  cm, and the girls of the control group –  $174.37 \pm 15.08$  cm. The girls of the experimental group improved their result in standing long jump by 2.78 cm, the girls of the control group improved their result by 1 cm.

The average result of the experimental group in 60 m run was  $9.71 \pm 0.54$  sec, the control group –  $10.39 \pm 0.57$  sec. The experimental group improved their result by 1.18 sec, the control group – by 0.28 sec.

The average result of the experimental group in 100 m run was  $17.74 \pm 0.99$  sec, the control group –  $18.65 \pm 0.95$  sec. The girls of the experimental group improved their result in 100 m run by 1.45 sec, control group – by 0.2 sec (Table 3).

The average values of the initial testing of the experimental group in 1 kg medicine ball throws were 530.33 cm, in single-leg squats – 13.17 repetitions. The average values of the initial testing of the control group in 1 kg medicine ball throws were 528.87 cm, in single-leg squats – 14.25 repetitions.

The average result of the girls of the experimental group in 1 kg medicine ball throws was  $580.47 \pm 17.17$  cm, and the girls of the control group –  $539.50 \pm 22.29$  cm. The girls of the experimental group improved their result in 1 kg medicine ball throws by 50.14 cm, control group – by 10.63 cm.

The average result of the girls of the experimental group in single-leg squats was  $19.08 \pm 2.41$  cm, and the girls of the control group –  $15.37 \pm 2.13$  cm. The girls of the experimental group improved their result in single-leg squats by 5.91 cm, control group – by 1.12 cm (Table 4).

**Table 3: Physical fitness indices of the girls of the experimental and control groups before and after the experiment**

EG before the experiment	EG after the experiment	CG before the experiment	CG after the experiment
60 m run (sec)			
10.89±0.47	9.71±0.54	10.67±0.54	10.39±0.57 sec
100 m run (sec)			
19.09±0.94	17.84±0.99	18.81±0.86	18.65±0.95

**Table 4: Physical fitness indices of the girls of the experimental and control groups before and after the experiment**

Physical fitness tests	Group	Before	After
1 kg medicine ball throws (cm)	EG	530.33±15.24	580.47±17.17
	CG	528.87±16.39	534.50±22.29
Single-leg squats	EG	13.17±1.58	19.08±2.41
	CG	14.25±1.67	16.37±2.13

Having compared the indicators of physical fitness of the girls of the experimental and control groups at the beginning of the study, we found that there is no statistically significant differences between the groups studied. Both the control and the experimental group changed their indicators as a result of the applied methods, in our case, for better. It should be noted that the technique used in the experimental group differs in effectiveness from the control group.

### SUMMARY:

Such rates of change in the studied physical fitness indicators contributed to the fact that at the intermediate stage of the study the female students of the experimental group began to significantly outstrip their peers from the control group in push-ups, lying pull-ups, 1 kg medicine ball throws and single-leg squats ( $p < 0.05$ ).

### CONCLUSION:

Thus, the intermediate result of introducing the experimental powerlifting program of physical education in the process of preparing future teachers indicates its effectiveness. The use of powerlifting elements in sport classes contributes to the increase in the level of physical fitness of students, ensures their readiness to the GTO and compulsory qualifying standards. At the same time, in our opinion, the further study of the effectiveness of powerlifting in the optimization of physical and mental health indicators of student youth, the formation of an actively positive attitude to physical culture and sports, seems to be relevant.

### ACKNOWLEDGEMENT

The authors express their gratitude to Kazan Federal University for the assistance provided in publishing the scientific papers by young scientists.

### REFERENCES:

1.Garipova A.Z. The potential of powerlifting in improving the level of physical fitness of female

students of a pedagogical university / A.Z. Garipova, F.R. Zotova // Scientific-theoretical journal "Uchenye zapiski universiteta imeni P.F. Lesgafta". – 2016. – No. 3(133). – P. 53-57.

2.Zotova F.R. Student sport in the region: its state, problems and prospects / F.R. Zotova, I.F. Faizullin // Science and sport: modern trends. – 2015. – V. 6. – No. 1. – P. 32-38.

3.Wikipedia. Free Encyclopedia. <http://ru.wikipedia.org>

4.Sheiko B.I., Gorulev P.S., Rumyantseva E.R., Tsedov R.A. Powerlifting. From the novice to the master / Ed. Sheiko B.I. – Moscow, 2013. – 560 p.: fig.

5.Garipova A.Z. Potential of powerlifting in the formation of physical and personal qualities / A.Z. Garipova // Science and sport: modern trends. – 2014. – V. 5. – No. 4. – P. 96-99.

6.Kalenikova N.G. The constructive technique of professionally-applied physical training of the students of technical universities by means of powerlifting: Author's abstract of Cand. Ped. Sciences / N.G. Kalenikova. – Smolensk, 2004.

7.Garipova A.Z. Self-assessment of the emotional-value attitude to powerlifting training / A.Z. Garipova, F.R. Zotova // Theory and practice of physical culture. – 2014. – No. 6. – P. 61.

8.Martynova V.A., Khalitova K.A. Improvement of the effectiveness of the educational process through the introduction of the GTO standard exercises // Formation of the physical culture and culture of students' health in the context of the modernization of education: a collection of scientific papers of the All-Russian Scientific and Practical Conference. Yelabuga: Publishing House of Yel of K(V)FU, 2015. – P. 153 - 157.

9.Cuntera Patrick Tom Tinsman "Powerlifting USA" October 1998

10.Daniels Douglas Deadlift Details. "Powerlifting USA" November 1999

11.Albina Z. Garipova Motivational components of sports activity of powerlifters, journal of organizational culture communications and conflict Volume 20, Special Issue 2, 2016 pp.138-146

12.Muscle cross-sectional area and torque in resistance-trained subjects / S.E. Alway [et. al.] // European J. of Applied Physiology. - 1990. -V. 60. -P. 86-90.